

Management of shoot gall psylla in mango: KVK Dehradun

Brief Background:

Amongst various insect-pests, shoot gall psylla, *Apsylla cistellata* Buckton (Psyllidae: Homoptera) is a devastating pest of mango causing formation of galls on the leaf axils which result in inhibition of inflorescence and most of the affected branches later dry up. According to an estimate that more than 4000 ha area are badly affected with incidence of shoot gall psylla in Dehradun district of Uttarakhand. From the last one decade, the incidence of shoot gall psylla has increased considerably in Dehradun. monocrotophos, dimethoate and quilanphos insecticides recommended earlier for the control of shoot gall psylla but it has been seen that these insecticides are not giving any relief to the farmers from the last 6-7 years. It may be due to continuous use of monocrotophos, quilanphos and dimethoate and change in agro environmental conditions.

Accordingly, we contacted ICAR-CISH, Lucknow for effective management of shoot gall psylla in mango. They informed that thiamethoxam 1 g per liter of water + profenophos 2 ml per liter of water + sticker 1 2 ml per liter of water has been found outstanding in management of shoot gall psylla. In order to observe their effectiveness, it has been conducted demonstrations along with earlier recommended insecticides in which two spray of thiamethoxam 1 g per liter of water + profenophos 2 ml per liter of water have been reduced the incidence of shoot gall psylla up to 90 per cent in most affected orchard.

Character of technology: (i) The insecticides i.e. thiamethoxam 1 g per liter of water + profenophos 2 ml per liter of water + sticker 1 2 ml per liter of water have been found most promising in management of shoot gall psylla in mango. (ii) Two application of both the insecticides have been suggested, first spraying should be done in 11th week of August and second spraying be done 15 days after 1st spraying. (iii) The spraying of these insecticides by the farmers on the recommendation of KVK, Dehradun managed the incidence of shoot gall psylla and due to which productivity of mango has been doubled. (iv) About 4000 ha area of mango are badly affected with the incidence of shoot gall psylla.

Impact of technology:

Adoption Status:

:(i) Two Spraying of recommended insecticides were done by the farmers of Badwala village of Vikasnagar block of Dehradun in 21 ha area in August-September, 2013 due to

which farmers harvested about 4000 Q. mango from 2100 trees in June-August, 2014 which was almost doubled.

- (ii) Two spraying of recommended insecticides have been applied by the farmers of 24 villages of Vikasnagar and Sahaspur blocks of Dehradun in about 200 ha area. The spraying of these insecticides significantly reduced the incidence of shoot gall psylla and increased the productivity of mango. According to an estimate and data recorded, farmers harvested about 40,000 Q. mango from 200 ha area in June-August, 2015.
- (iii) The intensive campaign organized by KVK, Dehradun encouraged the mango farmers of the region. The farmers applied above insecticides in about 1200 ha area in about 55 villages of Vikasnagar and Sahaspur blocks of Dehradun during August-September, 2015. The feedback received from the farmers revealed that they harvested 2,40,000 Q. mango fruits from 1200 ha area between June-August, 2016.

Area to be spread : From the last three years area has been increased from 21 ha in 2013 to 1200 ha in 2015. According to an estimate and campaign organized in August, 2016 by KVK, Dehradun, it is expected that about more than 2000 ha area will be covered under management of shoot gall psylla in 2016.

Expected increase in production : The impact of this technology increased the productivity of mango from 9.6 MT per ha to 20.0 MT per ha. The visible impact reflected due to technological intervention on management of shoot gall psylla at Badwala village on 2100 mango trees during August-September, 2013 completely changed the

mindset of neighbouring farmers. The convincing impact encouraged the farmers to save their orchards from the menace of shoot gall psylla. The impact of the spraying done by the farmers in their mango orchards on the recommendation of KVK, Dehradun resulted in changing the mindset of the neighbouring farmers whose faith and interest were dwindling towards mango cultivation year after year and was in impression that this destructive pest could have not been controlled.

Income

: The technological interventions made on management of shoot gall psylla in mango from 2013 to 2016 enhanced the income of farmers. According to an estimate, data recorded from the mango orchards and interaction held with the farmers revealed that about 6.0 crores additional income earned by the farmers due to management of shoot gall psylla in mango from the last three years.



Incidence of shoot gall psylla in mango



Adults of shoot gall psylla insect



View of shoot gall psylla campaign in mango



Scientists and farmers observing bumper mango production



Bumper mango production due to management of shoot gall psylla



Scientist and famers showing mango fruits harvested from shoot gall psylla protected orchard